

SECTION 811 — ELECTRICAL HAND HOLES, MANHOLES, PULL AND JUNCTION BOXES

811.01 DESCRIPTION. This work shall consist of furnishing and installing electrical hand holes, manholes, pull and junction boxes as specified in the Contract Documents or as directed by the Engineer.

811.02 MATERIALS.

811.02.01 Hand holes.

No. 57 Coarse Aggregate	901.01
Concrete Mix No. 2	902.10
Brick	903.02
Bolts	A 276, Type 304
Frames and Covers	AISC 1020 Steel
Precast Concrete	M 199

811.02.02 Manholes.

No. 57 Coarse Aggregate	901.01
Reinforced Concrete Pipe	905
Cast Iron Manhole Covers	909.04
Polyethylene (PE)	921.10
Precast Concrete	M 199

811.02.03 Pull and Junction Boxes.

Steel Plate	909.02
Cast Iron	909.04

811.03 CONSTRUCTION.

811.03.01 Hand Holes and Manholes. Hand holes and manholes shall be installed flush to drain with the finished grade. Concrete shall be mixed, placed and tested as specified in Section 420. Aggregate drain shall be installed as specified in the Contract Documents. Excavation and backfill shall conform to Section 809. When hand holes and manholes are installed in sidewalks, the sidewalk shall be removed and reinstalled to the nearest joint. Spaces between conduit and the hand hole and manhole wall shall be filled or patched with concrete or other sealer as directed by the Engineer.

Hand hole and manhole frames shall be set in a mortar or concrete bed as shown in the Contract Documents.

811.03.02 Pull and Junction Boxes. Conduit entrance shall be provided with conduit hubs or bosses of sufficient thickness that five full threads of the conduit shall engage the threaded holes in the box.

811.04 MEASUREMENT AND PAYMENT. Electrical Hand Holes, Manholes, and Pull and Junction Boxes will be measured and paid for at the Contract unit price per each unless otherwise specified in the Contract Documents. The payment will be full compensation for all excavation, aggregate drain, concrete, bolts, bricks, pipes, backfill, sealer, frames and covers, and for all material, labor, equipment, tools, and incidentals necessary to complete the work.

SECTION 812 — WOOD SIGN SUPPORTS

812.01 DESCRIPTION. This work shall consist of furnishing and erecting wood sign supports as specified in the Contract Documents or as directed by the Engineer. Signs shall be as specified in Section 813.

812.02 MATERIALS. Wood supports shall be No. 1 dense grade.

Wood	921.05
Preservatives	921.06

812.03 CONSTRUCTION. Wood sign supports shall be placed in the ground in a plumb position to the depth and lateral orientation specified in the Contract Documents. Backfill shall consist of suitable excavation material compacted in place. Holes for embedding sign supports shall be augered or dug using methods approved by the Engineer. Driving or hammering wood sign supports into undisturbed earth is prohibited.

When specified in the Contract Documents, wood sign supports shall have drilled holes conforming to the breakaway requirements specified in AASHTO Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, or as indicated in the Contract Documents.

812.04 MEASUREMENT AND PAYMENT. Wood Sign Supports will be measured and paid for at the Contract unit price per linear foot for the length and size specified in the Contract Documents. The payment will be full compensation for all excavation and backfill, drilled holes, and for all material, labor, equipment, tools, and incidentals necessary to complete the work.